

IN THE CLAIMS

The following listing of the claims replaces all prior versions and listings of the claims in relation to the present patent application.

1. - 13. (canceled).

14. (currently amended) A rail system for transmitting power and data signals comprising:

an insulative support;

first and second power conductors supported lengthwise on the support via an elongate support edge at least partially embedded in the insulative support, and configured to conduct electrical power; and

first and second data conductors supported lengthwise on the support via an elongate support edge at least partially embedded in the insulative support, wherein the data conductors are disposed between the power conductors and configured to transmit data signals;

wherein each of the power and data conductors presents a respective elongate connection edge opposite the respective support edge, the connection edges being generally aligned for receiving respective connector elements.

15. (original) The system of claim 14, wherein the power conductors at least partially shield the data conductors from electromagnetic interference.

16. (original) The system of claim 14, further comprising at least one capacitor coupled across the power conductors.

17. (original) The system of claim 14, further comprising a second set of power conductors supported lengthwise on the support at cross sectional outermost positions on either side of the first and second power conductors.

18. (original) The system of claim 14, wherein the conductors are uninsulated conductive rails.

19. (original) The system of claim 14, wherein the first and second data conductors are spaced from one another by a first, substantially constant predetermined distance.

20. (original) The system of claim 19, wherein the first and second power conductors are spaced from respective data conductors by a second, substantially constant predetermined distance.

21. (original) The system of claim 20, wherein the first predetermined distance is equal to the second predetermined distance.

22. (currently amended) A rail system for transmitting power and data signals comprising:

an insulative support;

a first set of power conductors supported lengthwise on the support and configured to conduct electrical power;

a second set of power conductors supported lengthwise on the support and configured to conduct electrical power; and

first and second data conductors supported lengthwise on the support and configured to transmit data signals;.

wherein the first and second set of power conductors and the first and second data conductors are generally mechanically inflexible.

23. (original) The system of claim 22, wherein if the first set of power conductors are identified as A and B, the second set of power conductors are identified as C and D, and the data conductors are identified as E and F, the conductors are disposed cross-sectionally on the support in the order A, C, E, F, D, B.

24. (original) The system of claim 23, wherein conductors A and B are configured to transmit ac power.

25. (original) The system of claim 24, wherein conductors C and D are configured to transmit dc power.

26. (original) The system of claim 22, wherein if the first set of power conductors are identified as A and B, the second set of power conductors are identified as C and D, and the data conductors are identified as E and F, the conductors are disposed cross sectionally on the support in the order A, E, C, D, F, B.

27. (original) The system of claim 26, wherein conductors A and B are configured to transmit ac power.

28. (original) The system of claim 26, wherein conductors C and D are configured to transmit dc power.

29. (original) The system of claim 22, further comprising a first capacitor coupled across the first set of power conductors.

30. (original) The system of claim 29, further comprising a second capacitor coupled across the second set of power conductors.

31. (original) The system of claim 22, wherein the conductors are disposed at substantially equal spacing across the support.

32. (original) An open rail system for transmitting power and data signals comprising:

an insulative support;

first and second data conductors supported lengthwise on the support and configured to transmit data signals;

a first set of power conductors supported lengthwise on the support at positions flanking the data conductors and configured to conduct electrical power;

a second set of power conductors supported lengthwise on the support at positions flanking respective power conductors of the first set and configured to conduct electrical power; and

a capacitor coupled across the first set of power conductors.

33. (original) The system of claim 32, further comprising a second capacitor coupled across the second set of power conductors.

34. (original) The system of claim 32, wherein the first set of power conductors transmits dc power.

35. (original) The system of claim 34, wherein the second set of power conductors transmits ac power.

36. (original) The system of claim 32, wherein the first set of power conductors transmits ac power.

37. (original) The system of claim 36, wherein the second set of power conductors transmits dc power.

38. (~~previously presented~~currently amended) A rail system, comprising:
an insulative support;
first and second rail power conductors mounted to the insulative support;
first and second rail data conductors mounted to the insulative support, wherein the data conductors and the power conductors are substantially parallel to one another;
wherein each the rail data conductors and the rail power conductors is mechanically engageable with a plurality of connectors at a plurality of locations along the length of the rail, each connector being connected to a different electrical component.

39. (previously presented) The rail system as recited in claim 38, comprising at least one capacitor coupled across the power conductors.

40. (previously presented) The rail system as recited in claim 38, wherein if the first and second data conductors are disposed between the first and second power conductors.

41. (previously presented) The rail system as recited in claim 38, wherein the rail power conductors and the rail data conductors extend over at least three-fourths of the length of the insulative support.